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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,041	02/13/2002	Indu Bhusan Chatterjee	3030.004USU	7417
7590 04/21/2004			EXAMINER	
Paul D. Greeley, Esq. Ohlandt, Greeley, Ruggiero & Perle, L.L.P. 10th Floor One Landmark Square Stamford, CT 06901-2682			WALLS, DIONNE A	
			ART UNIT	PAPER NUMBER
			1731	
DATE MAILED: 04/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/076,041	CHATTERJEE, INDU BHUSAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dionne A. Walls	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 53-95 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 53-68 and 79-95 is/are rejected.
- 7) ☒ Claim(s) 69-78 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 12, 2004 has been entered.

### ***Claim Objections***

Claim 94 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 87. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 58, 60 and 87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 58, it is not clear what the recitation “wherein the requisite amounts of specific mesh the activated charcoal” is stating (emphasis added). It appears that this underlined language should be deleted.

Regarding claims 60, the phrase “each charcoal bed” lacks antecedent basis, and it is not clear what is intended by “5.0+0.5 mm” (The Examiner will interpret this as “5.5mm”)

Regarding claim 87, the phrase “the mainstream smoke solution” lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1, and 79-95 are rejected under 35 U.S.C. 102(b) as anticipated by Mentzel et al (US. Pat. No. 5,423,336).

Mentzel discloses all that is recited in the claims (see cols. 2-4). Since Mentzel states that the activated carbon (corresponding to the claimed “charcoal”) particles can have a screen size ranging from 177-500 microns (approximately 35-80 mesh), it is evident that this reference envisions the selection of charcoal particles having the claimed mesh size.

Regarding claims 79-95, it would follow that the filter of Applicant’s Admitted Art modified by Mentzel et al would demonstrate these claimed functions/attributes since

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structurally, the filter of the applied art is similar, if not substantially identical, to that which is claimed. Where the claimed and prior art product/apparatus is identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430,433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 53-68 and 79-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Art in view of Mentzel et al (US. Pat. No. 5,423,336).

In the instant specification page 14, lines 8-15, Applicant admits that typical charcoal filter cigarettes have a first conventional cellulose acetate fiber filter, acting as the mouthpiece, the length of which may vary according to convenience, e.g. 10-15 mm; a second conventional cellulose acetated fiber filter, acting as a barrier between a charcoal bed and a tobacco portion of the cigarette to prevent infiltration of charcoal into the tobacco, the length of which may be 2-4 mm; and a charcoal filter bed located between the two conventional cellulose fiber filters, the length of the activated charcoal

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bed varying depending on the amount of charcoal used, e.g. 4.5-5.5 mm per 100 mg; or 9-11 mm per 200 mg; or 13-16 mm per 300 mg, etc. While Applicant may not state that the charcoal used in the charcoal bed of the known charcoal filter cigarettes has the claimed charcoal particles and a grain size ranging between 25-100 mesh, Mentzel discloses a filter cigarette having a charcoal bed filter section sandwiched between cellulose acetated filter sections, the charcoal (activated carbon) particles having a screen mesh width in the range from 177-500 microns (corresponding to approximately 35-80 mesh – which is within the claimed range). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate charcoal particles having this mesh size into the charcoal bed of charcoal filter cigarettes since utilizing charcoal particles of this size, in charcoal filter cigarettes, is known as evidenced by the Mentzel et al reference.

Regarding claims 59-68, it would have been obvious to one having ordinary skill in the art at the time of the invention, in an effort to achieve optimal adsorption of noxious cigarette smoke constituents, to arrive at the claimed charcoal size and amount, and charcoal bed size, after routine experimentation, since these charcoal grain sizes and amounts are envisioned by the applied prior art.

Regarding claims 79-87 and 92-95, it would follow that the filter of Applicant's Admitted Art modified by Mentzel et al would demonstrate these claimed functions/attributes since structurally, the filter of the applied art is similar, if not substantially identical, to that which is claimed. Where the claimed and prior art product/apparatus is identical or substantially identical in structure or composition, a

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*prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430,433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

### ***Allowable Subject Matter***

7. Claims 69-78 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

8. Applicant's arguments filed January 12, 2004 have been fully considered but they are not persuasive.

- Applicant argues that the prior art lacks any reference as to the amount and size of charcoal required in relation to the length of the cigarette. Specifically, it argues that the Mentzel et al reference uses non-specific amounts of different carbon particles without mentioning the percentage weight of each mesh size in the mixture. However, the Examiner believes that while the Mentzel reference may be silent as to the amount of charcoal particles, it does give specificity to the size of these particles. One having ordinary skill in the art may select any mesh size in the range disclosed. For instance, one may opt to provide charcoal particles having a mesh size of 50. This would satisfy the limitation of the independent claim 1, since such charcoal particles would pass through a 44 mesh screen but be retained on a 52 mesh screen. Also, even though Mentzel et al is silent with respect to the amount of charcoal particles to be used, it

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follows that one of ordinary skill would optimize the amount so that the quantity providing for the most effective removal of toxic components is utilized. Further, Applicant has even provided a general guideline of the amounts of charcoal typically used in charcoal beds, i.e. 100mg – 300mg, depending on the length. With this admission in the disclosure, it seems quite obvious that one having ordinary skill in the art would provide the charcoal particles in amounts similar to that disclosed, since these amounts are obviously ideal in removing toxic components in cigarette smoke.

- Applicants argue that the cellulose acetate part of the filter in Mentzel et al has practically no role in reducing p-BSQ from the mainstream smoke, but Applicant has not provided language in the claims reciting that the cellulose acetate part in its filter does perform this function.

- Lastly, it Appears that Applicant intends to emphasize the correlation between mesh size and amount of charcoal used, and the novelty that is associated therewith; however, it is not clear what that correlation is, absent the recitation found in claims 69-78 – which define the specific amounts of two different types/sizes of charcoal. It would follow that, absent evidence to the contrary, a lesser amount of charcoal would be needed the greater the particle size, and vice versa. And, Applicant has already admitted that the amount of charcoal will be dependent on the length of the charcoal bed. Therefore, a clearer articulation of the intended novel correlation is needed, as well as some evidence disclosing why it would NOT be obvious to arrive at a particular amount of charcoal particles for any given charcoal size, i.e. why is it not obvious to



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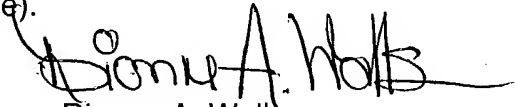
provide 0.2 g of BS 44/52, or 0.15 g of BS 72/85, after routine experimentation, in a charcoal bed filter portion?

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne A. Walls whose telephone number is (571) 272-1195. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dionne A. Walls  
Primary Examiner  
Art Unit 1731

April 19, 2004